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RAW SEQUENCE LISTING

DATE: 03/04/2002

PATENT APPLICATION: US/09/901,782A

TIME: 08:45:48

Input Set : A:\09901782 corrected sequence listing.txt

Output Set: N:\CRF3\03042002\I901782A.raw

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3 <110> APPLICANT: VisiGen Biotechnologies
5 <120> TITLE OF INVENTION: REAL-TIME SEQUENCE DETERMINATION
7 <130> FILE REFERENCE: 00007/01UTL
9 <140> CURRENT APPLICATION NUMBER: 09/901,782A
10 <141> CURRENT FILING DATE: 2001-07-09
12 <150> PRIOR APPLICATION NUMBER: 60/ 216,594
13 <151> PRIOR FILING DATE: 2000-07-07
15 <160> NUMBER OF SEQ ID NOS: 48
17 <170> SOFTWARE: PatentIn version 3.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 38
21 <212> TYPE: DNA
22 <213> ORGANISM: Thermus aquaticus
24 <220> FEATURE:
W--> 25 <221> NAME/KEY: primer
26 <222> LOCATION: (1)..(38)
27 <223> OTHER INFORMATION: Synthetic DNA forward primer for amplifying full-length Taq
Pol
28      I coding sequence. 5' to 3' listing
31 <400> SEQUENCE: 1
32 gcgaattcat gaggggatg ctgcccctct ttgagccc
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 37
37 <212> TYPE: DNA
38 <213> ORGANISM: Thermus aquaticus
40 <220> FEATURE:
W--> 41 <221> NAME/KEY: primer
42 <222> LOCATION: (1)..(37)
43 <223> OTHER INFORMATION: Synthetic DNA Reverse primer for amplifying full-length Taq P
44      ol I coding sequence. 5' to 3' listing.
47 <400> SEQUENCE: 2
48 gcgaattcac cctccttggc ggagcgccag tcctccc
51 <210> SEQ ID NO: 3
52 <211> LENGTH: 37
53 <212> TYPE: DNA
54 <213> ORGANISM: Thermus aquaticus
56 <220> FEATURE:
W--> 57 <221> NAME/KEY: primer
58 <222> LOCATION: (1)..(37)
59 <223> OTHER INFORMATION: Synthetic DNA primer for truncated Taq Pol I coding sequence.
60      5' to 3' listing.
63 <400> SEQUENCE: 3
64 aatccatggg ccctggagga ggccccctgg cccccgc
67 <210> SEQ ID NO: 4

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68 <211> LENGTH: 32
69 <212> TYPE: DNA
70 <213> ORGANISM: Thermus aquaticus
72 <220> FEATURE:
73 <221> NAME/KEY: mutation
74 <222> LOCATION: (14)..(16)
75 <223> OTHER INFORMATION: Site 643 of Taq Pol I: Alanine codon, gcc, to cysteine codon,
tgc:
76      5' to 3' listing
79 <400> SEQUENCE: 4
80 ccacacggag acctgcagct ggatgttcgg cg                      32
83 <210> SEQ ID NO: 5
84 <211> LENGTH: 32
85 <212> TYPE: DNA
86 <213> ORGANISM: Thermus aquaticus
88 <220> FEATURE:
89 <221> NAME/KEY: Mutation
90 <222> LOCATION: (17)..(19)
91 <223> OTHER INFORMATION: Site 643 of complement strand of Taq Pol I: alanine antisense
cod
92      on, ggc, to cysteine antisense codon, gca. 5' to 3' listing.
95 <400> SEQUENCE: 5
96 cgccgaacat ccacgagcag gtctccgtgt gg                      32
99 <210> SEQ ID NO: 6
100 <211> LENGTH: 35
101 <212> TYPE: DNA
102 <213> ORGANISM: Thermus aquaticus
104 <220> FEATURE:
105 <221> NAME/KEY: Mutation
106 <222> LOCATION: (15)..(17)
107 <223> OTHER INFORMATION: Mutant Taq Pol 1: site 647 phe to cys codon mutation: ttc ->
tgc.
108      5' to 3' listing
111 <400> SEQUENCE: 6
112 ccgccagctg gatgtgcggc gtccccggg aggcc                      35
115 <210> SEQ ID NO: 7
116 <211> LENGTH: 35
117 <212> TYPE: DNA
118 <213> ORGANISM: Thermus aquaticus
120 <220> FEATURE:
121 <221> NAME/KEY: Mutation
122 <222> LOCATION: (19)..(21)
123 <223> OTHER INFORMATION: Taq Pol I Complement Strand: Site 647 phe to cys mutation:
gaa ->
124      gca. 5' to 3' listing.
127 <400> SEQUENCE: 7
128 ggctctccgg gggacgccgc acatccacgt ggcgg                      35
131 <210> SEQ ID NO: 8
132 <211> LENGTH: 37
133 <212> TYPE: DNA
134 <213> ORGANISM: Thermus aquaticus
136 <220> FEATURE:
137 <221> NAME/KEY: Mutation

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138 <222> LOCATION: (19)..(21)
139 <223> OTHER INFORMATION: Taq Pol I Mutation: Site 649 val to cys: gtc -> tgc. 5' to
3' lis
140      ting.
143 <400> SEQUENCE: 8
144 gccagctgga tggtcggctg cccccgggag gccgtgg          37
147 <210> SEQ ID NO: 9
148 <211> LENGTH: 37
149 <212> TYPE: DNA
150 <213> ORGANISM: Thermus aquaticus
152 <220> FEATURE:
153 <221> NAME/KEY: Mutation
154 <222> LOCATION: (17)..(19)
155 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary strand: Site 649 val to
cys: gac
156      -> gca. 5' to 3' listing.
159 <400> SEQUENCE: 9
160 ccacggcctc ccggggggcag ccgaacatcc agctggc          37
163 <210> SEQ ID NO: 10
164 <211> LENGTH: 36
165 <212> TYPE: DNA
166 <213> ORGANISM: Thermus aquaticus
168 <220> FEATURE:
169 <221> NAME/KEY: Mutation
170 <222> LOCATION: (13)..(15)
171 <223> OTHER INFORMATION: Taq Pol I Mutation: Site 652 glu to cys: Codon 652 gtc ->
tgc. 5
172      ' to 3' listing.
175 <400> SEQUENCE: 10
176 ggcgtccccc ggtgcgccgt ggacccccctg atgcgc          36
179 <210> SEQ ID NO: 11
180 <211> LENGTH: 36
181 <212> TYPE: DNA
182 <213> ORGANISM: Thermus aquaticus
184 <220> FEATURE:
185 <221> NAME/KEY: Mutation
186 <222> LOCATION: (22)..(24)
187 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 652 glu to
cys:
188      antisense codon: ctc -> gca. 5' to 3' listing.
191 <400> SEQUENCE: 11
192 gcgcatcagg ggtccacgg cgcaccgggg gacgcc          36
195 <210> SEQ ID NO: 12
196 <211> LENGTH: 36
197 <212> TYPE: DNA
198 <213> ORGANISM: Thermus aquaticus
200 <220> FEATURE:
201 <221> NAME/KEY: Mutation
202 <222> LOCATION: (16)..(18)
203 <223> OTHER INFORMATION: Taq Pol I Mutation: AA Site 653 ala to cys: codon: gcc ->
tgc. 5
204      ' to 3' listing.
207 <400> SEQUENCE: 12

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208 ggcgtcccc gggagtgcgt ggaccccctg atgcgc

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211 <210> SEQ ID NO: 13
212 <211> LENGTH: 36
213 <212> TYPE: DNA
214 <213> ORGANISM: Thermus aquaticus
216 <220> FEATURE:
217 <221> NAME/KEY: Mutation
218 <222> LOCATION: (19)..(21)
219 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 653 ala to
cys:
220     antisense codon: ggc -> gca. 5' to 3' listing.
223 <400> SEQUENCE: 13
224 gcgcacacagg gggccacgc actcccgggg gacgcc 36
227 <210> SEQ ID NO: 14
228 <211> LENGTH: 33
229 <212> TYPE: DNA
230 <213> ORGANISM: Thermus aquaticus
232 <220> FEATURE:
233 <221> NAME/KEY: Mutation
234 <222> LOCATION: (16)..(18)
235 <223> OTHER INFORMATION: Taq Pol I Mutation: AA 654 val to cys: codon: gtg -> tgt. 5'
to
236     3' listing.
239 <400> SEQUENCE: 14
240 gtcccccgagg aggcctgtga cccctgatg cgc 33
243 <210> SEQ ID NO: 15
244 <211> LENGTH: 33
245 <212> TYPE: DNA
246 <213> ORGANISM: Thermus aquaticus
248 <220> FEATURE:
249 <221> NAME/KEY: Mutation
250 <222> LOCATION: (16)..(18)
251 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 654 val to
cys:
252     antisense codon: cac -> aca. 5' to 3' listing.
255 <400> SEQUENCE: 15
256 gcgcacacagg gggccacagg cctcccgggg gac 33
259 <210> SEQ ID NO: 16
260 <211> LENGTH: 33
261 <212> TYPE: DNA
262 <213> ORGANISM: Thermus aquaticus
264 <220> FEATURE:
265 <221> NAME/KEY: Mutation
266 <222> LOCATION: (16)..(18)
267 <223> OTHER INFORMATION: Taq Pol I Mutation: AA 655 asp to cys: codon: gac -> tgc
270 <400> SEQUENCE: 16
271 ccccgaggagg ccgtgtgccc cctgatgcgc cgg 33
274 <210> SEQ ID NO: 17
275 <211> LENGTH: 33
276 <212> TYPE: DNA
277 <213> ORGANISM: Thermus aquaticus
279 <220> FEATURE:
280 <221> NAME/KEY: Mutation

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281 <222> LOCATION: (16)..(18)
282 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 655 asp to
cys:
283     antisense codon: gtc -> gca. 5' to 3' listing.
286 <400> SEQUENCE: 17
287 ccggcgcatc agggggcaca cggcctcccg ggg                                     33
290 <210> SEQ ID NO: 18
291 <211> LENGTH: 33
292 <212> TYPE: DNA
293 <213> ORGANISM: Thermus aquaticus
295 <220> FEATURE:
296 <221> NAME/KEY: Mutation
297 <222> LOCATION: (16)..(18)
298 <223> OTHER INFORMATION: Taq Pol I Mutation: AA 656 pro to cys: codon: ccc -> tgc. 5'
to 3
299     ' listing.
302 <400> SEQUENCE: 18
303 cgggaggccg tggactgcct gatgcgccgg gcg                                     33
306 <210> SEQ ID NO: 19
307 <211> LENGTH: 33
308 <212> TYPE: DNA
309 <213> ORGANISM: Thermus aquaticus
311 <220> FEATURE:
312 <221> NAME/KEY: Mutation
313 <222> LOCATION: (16)..(18)
314 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 656 pro to
cys:
315     antisense codon: ggg -> gca. 5' to 3' listing.
318 <400> SEQUENCE: 19
319 cgcccggcgc atcaggcagt ccacggcctc ccg                                     33
322 <210> SEQ ID NO: 20
323 <211> LENGTH: 30
324 <212> TYPE: DNA
325 <213> ORGANISM: Thermus aquaticus
327 <220> FEATURE:
328 <221> NAME/KEY: Mutation
329 <222> LOCATION: (13)..(15)
330 <223> OTHER INFORMATION: Taq Pol I Mutation: AA 657 leu to cys: codon: ctg -> tgc. 5'
to 3
331     ' listing.
334 <400> SEQUENCE: 20
335 gccgtggacc cctgcatgcg ccgggcggcc                                     30
338 <210> SEQ ID NO: 21
339 <211> LENGTH: 30
340 <212> TYPE: DNA
341 <213> ORGANISM: Thermus aquaticus
343 <220> FEATURE:
344 <221> NAME/KEY: Mutation
345 <222> LOCATION: (16)..(18)
346 <223> OTHER INFORMATION: Taq Pol I Mutation Complementary Strand: AA Site 657 leu to
cys:
347     antisense codon: cag -> gca. 5' to 3' listing.
350 <400> SEQUENCE: 21

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351 ggccgcccgg cgcattgcagg ggtccacggc

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VERIFICATION SUMMARY

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L:25 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:41 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2
L:57 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3